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(71) Applicant and

(72) Inventor: **STONE, Herbert, L.** [US/US]; P.O. Box 22781, Houston, TX 77227-2781 (US).

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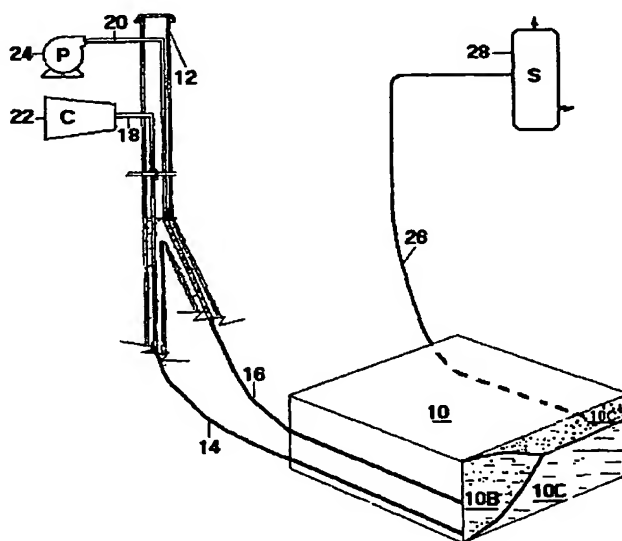
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(54) Title: METHOD FOR IMPROVED VERTICAL SWEEP OF OIL RESERVOIRS



(57) Abstract: In a WAG flood oil is displaced from a subterranean formation by injecting water alternately with gas into a single injection completion per pattern. The ratio of water to gas injected is the WAG ratio. In this invention, two separate injection completions (14, 16) are used in each pattern, with one placed directly above the other. A very low WAG ratio is used for injection into the bottom extremity of the formation. A very high WAG ratio is injected into the upper interval, at as high a rate as safely be used without fracturing the formation. In the preferred embodiment, two horizontal well bores (14, 16) serve as the two completion intervals. Proper design of this method gives a vertical sweep efficiency of the gas that is several-fold greater than the best of previous WAG flood designs, especially in thin formations.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E21B 43/00

US CL : 166/245, 268; 703/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 166/245, 266, 268, 272.6, 272.7, 275, 401, 402

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,325,147 B1 (DOERLER et al) 04 December (04.12.2001), col 2, lns 57-64	1
A	US 4,427,067 (STONE) 24 January 1984 (24.01.1984), col 2, lns 34-49	1

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

David J Bagnell

Telephone No. (703) 308-1113